POPULATION TODAY

Vol. 19, No. 6 June 1991

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FROM THE EDITOR'S DESK

Comeback attempts by 30-plus athletes in recent months have given a special poignancy to the passage of the baby-boom generation into middle age.

Mark Spitz, age 41, swam his way to seven gold medals at the 1972 Summer Olympics in Munich. But in April, Spitz's attempt to rejoin the U.S. Olympic team in 1992 suffered two setbacks. In separate 50-meter sprints, he finished two seconds—almost two body lengths—behind Tom Jager and Matt Biondi, two top swimmers in their mid-20s. Jim Palmer, age 45 and already a member of baseball's Hall of Fame, saw his dream of returning to the game die in the Baltimore Orioles' spring training camp.

And there's Bjorn Borg, age 34, the handsome tennis superstar who won six French Open titles and five consecutive Wimbledons between 1976 and 1980. Borg retired from tennis in 1984 while still in his 20s. In late April, 26-year-old Jordi Arrese slammed Borg's announced comeback plans in the Monte Carlo Open.

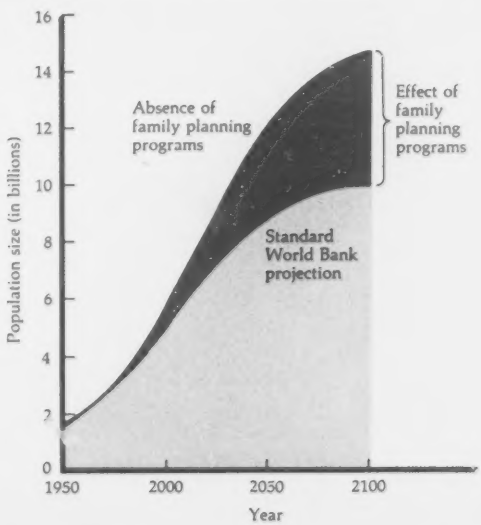
Yet fans can find some consolation in other boomer athletes. Nolan Ryan, baseball's career leader in strikeouts, is still pitching major league baseball for the Texas Rangers at age 44. In fact, just last month he pitched his major league record seventh career no-hitter in a 3-0 victory over Toronto. While in her late 20s, 1970s tennis *wunderkind* Chris Evert adapted to the increased athleticism of the women's game, enabling her to remain among the world's top four players up to her graceful exit in 1989—at the advanced age of 35.

Still, Spitz, Palmer, and Borg seem to provide an object lesson about what may be a propensity of the quintessential "youth generation" to assume they can somehow stay forever young.

—Susan Kalish and Kelvin Pollard

SPEAKING GRAPHICALLY

Family Planning Slows Population Growth



Without organized family planning programs, future population growth would be considerably higher than is now expected. Past family planning efforts have already produced a population reduction of 412 million as of 1990. Future impact could reach 0.7 billion in the year 2000, 3.1 billion in 2050, and 4.6 billion in 2100.

Source. John Bongaarts, W. Parker Mauldin, and James F. Phillips, "The Demographic Impact of Family Planning Programs," *Studies in Family Planning* Vol. 21, No. 6 (November/December 1990).

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AIDS Gains Momentum in 1990s

The AIDS pandemic is likely to dramatically worsen in the 1990s, as people already infected with HIV, AIDS' precursor, develop the symptoms of AIDS. The long period between infection and the onset of symptoms means that the disease moves through exposed populations like an iceberg—with a few people recognizably ill, but a much larger and hidden portion of the population without symptoms, capable of spreading infection at an ever-greater rate.

Although a total of 345,533 cases have been reported to the World Health Organization (WHO) by 162 countries as of April 1, the actual number is probably more than 1 million.[1] Ten million people around the world may be infected with HIV.[2] More than one-third of HIV-infected adults worldwide are women, and by the year 2000 the annual number of AIDS cases in women will begin to equal that of men.[3]

AIDS (Acquired Immune Deficiency Syndrome, which develops from the human immunodeficiency virus, or HIV) probably started in the 1950s or 1960s. The disease spread invisibly through the 1970s to such widely separated locations as the United States, Haiti, France, Belgium, Zaire, and Zambia.[4]

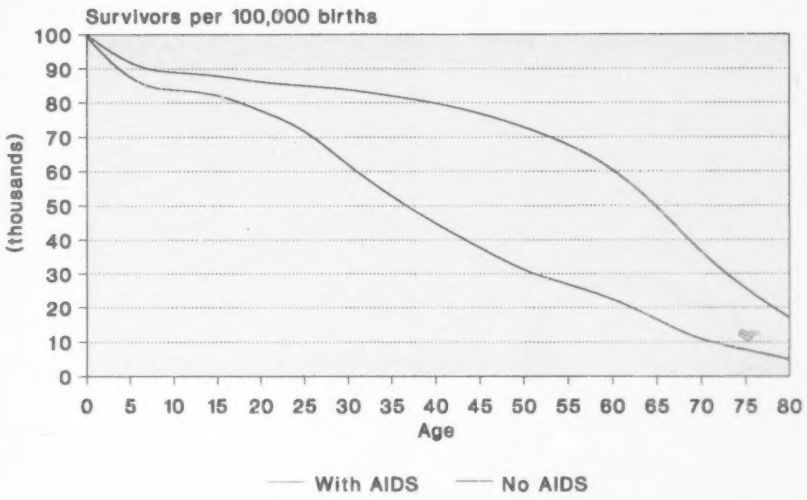
AIDS in the United States

AIDS was first recognized among homosexual men in the United States just a decade ago, in 1981. From 1981 through 1990, 100,777 deaths caused by AIDS were reported to the Centers for Disease Control (CDC). Of these, almost one-third (31,196) were reported during 1990, suggesting that the epidemic might be gaining momentum. During the 1980s, AIDS emerged as a leading cause of death among young adults in the United States. Most deaths from AIDS have occurred among homosexual or bisexual men (59 percent) and among women and heterosexual men who are intravenous-drug users (21 percent).[5] In major cities, it is now the leading cause of death for women age 20-40.[6] The extent to which it has spread to the general population is unknown. Although most deaths occurred among whites, death rates have been highest for blacks and Hispanics.

During 1990, the number of reported deaths per 100,000 population was 29.3 for blacks, 22.2 for Hispanics, 8.7 for non-Hispanic whites, 2.8 for Asian and Pacific Islanders, and 2.8 for American Indians and Alaskan Natives. The CDC estimates that approximately 1 million persons in the United States are currently infected with HIV.[7]

The average period between infection and the onset of AIDS appears to be seven years among those who were infected through blood transfusion, and 11 years in homosexual men. Yet, some people may be infected with HIV for up to 20 years before the onset of serious illnesses. But once developed, AIDS is invariably fatal.[8] In developed countries about half die within 18 months of diagnosis, and about 80 percent within three years. Survival time appears to be shorter in less developed countries, possibly due to later diagnosis and limited treatment facilities.

Urban Survivors in Sub-Saharan Africa, 2015: AIDS and No-AIDS Scenarios



Source. Peter O. Way and Karen Stanecki, "How Bad Will It Be? Modeling the AIDS Epidemic in Eastern Africa," Bureau of the Census, Center for International Research, Washington, D.C., 1991.

AIDS in Africa

Sub-Saharan Africa has been hardest hit by AIDS. With about 10 percent of the world's population, this region accounts for 25 percent of the world's reported AIDS cases. If all cases were reported that proportion would rise over one-half.

In Africa, AIDS spreads primarily through heterosexual contact—both between marriage partners and extramarital contacts. High rates of sexually transmitted diseases, combined with high rates of sexual partner exchange, fueled the spread of HIV in this region. Today, as many women as men in sub-Saharan Africa are infected with HIV. In the United States, by contrast, the ratio is eight to one. About 80 percent of all HIV-infected women live in Africa. WHO expects AIDS to kill 1.5 to 3 million women of reproductive age in Central and East Africa during the 1990s, producing several million orphans. UNICEF calculates roughly that each woman dying of AIDS will leave behind an average of two children.[9]

According to UNICEF, HIV-infected pregnant women are thought to have a 15 to 45 percent chance of passing the virus to their children before, during, or shortly after birth, although why some children become infected, while most do not is unknown. WHO estimates that, by 1992, Africa will have borne a total of 250,000 HIV-infected infants.[10]

Continued on next page

AIDS

Continued from previous page

Only considerable behavior change could limit the spread of AIDS in Africa, including increased condom use and a reduction of casual sexual contacts. Even if a cure for AIDS were to be developed, it might prove to be too expensive to help the majority of infected Africans.

According to a model produced by the U.S. Department of State's interagency Working Group (IWG), HIV infection will increase seven-fold in sub-Saharan Africa between 1990 and 2015, from about 1 to 8 percent of the total population. In urban areas it will rise from 4 to 16 percent.[11] AIDS will reduce urban life expectancy by 19 years in the region, cutting in half survival to age 45 in many sub-Saharan cities (see figure). Over the 25-year period, the annual population growth rates will fall from 2.2 to 1.8 percent—or about 50 million fewer people than without AIDS. Despite the heavy death toll projected, then, the effect of the AIDS epidemic on the overall population growth picture of sub-Saharan Africa is expected to be moderate.

—Nazy Roudi

Nazy Roudi is a research demographer at PRB.

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SURVEY REPORT

Peru

Both fertility and child mortality rates have declined in Peru since 1977, according to the 1986 Peru Demographic and Health Survey, the latest data available. Between 1981 and 1986, the proportion of currently married women using contraception increased from about 28 to 46 percent. Modern methods (such as IUDs, the pill, and sterilization) account for about half of this. More children are being breastfed during their first year of life and more children under age five are being immunized. Nevertheless, demographic and health indicators are far from optimal.

Alex de Sherbinin

Billboard in Cuzco, Peru, advertises family planning services.

The fertility rate declined by 23 percent between 1977 and 1986, from an average of 5.3 lifetime births per women to 4.1. Women's level of education has the greatest impact on fertility. Women with no education will average twice as many children as women with a secondary education (6.6 children compared with 3.1), and three times as many children as a woman with higher education (1.9).

Several other factors influence fertility levels and trends in Peru. Women are marrying later and consequently start having children later, so they are exposed to pregnancy for fewer years over their lifetimes. Breastfeeding is widely practiced, for 16 months on average (20 months for rural women, 13 months for urban women). Breastfeeding tends to extend the time following a birth during which a woman is less likely to conceive.

Women also report wanting fewer children. The average desired family size was three children; just over half considered two or fewer children as ideal. Most wanted to limit or space births. Nearly two-thirds of all women in union want no more children; an additional 6 percent have already been sterilized. Half of the women in union age 20-24 do not want another child. Enabling women to achieve their preferences through use of family planning would reduce the number of unwanted and mistimed births. For example, mothers report that in the five-year period prior to the survey, three in 10 births were unwanted; another three in 10 were wanted later.

Most women in union know of at least one modern contraceptive method. The most commonly used methods are rhythm, the IUD, the pill, and female sterilization. The least-known method is male sterilization.

Infant and child mortality rates in Peru are among the highest in Latin America. Currently one in nine children dies before age five. Death rates declined significantly over the past decade, especially after the first year of life, according to the survey.

—N.R.

Riche's Rules for Dealing with the Media

Academic demographers frequently want to get their findings out to a wider audience. That usually means talking to reporters. Here are some simple rules for making the most of your contacts with the press.

• **Know why you want to talk to reporters and why you don't—and make that happen.** Most academicians don't want to be a reporter's research assistant—looking up numbers for them. You do want to get your ideas to a broader audience, or perhaps get your organization some press attention that will help at funding time. Ask a reporter right up front, "Are you looking for some numbers, or did you want to interview me for attribution?"

• **Make the points you want to make, not the ones they want you to make.** Don't let reporters determine the agenda; after all, you're the expert. Take a lesson from the politicians and respond to a question you *don't* like with an answer you *do* like: "That's an interesting issue but the important point is really . . . ." If this is a live interview on radio or TV, you need to respond to the interviewer's question to be polite—but use it to build a bridge to the point *you* want to make.

• **Recognize that reiteration is essential.** As researchers, we feel that once we've discovered the "truth" and announced it, we've changed people's thinking. But other ideas, often contradictory, sometimes unfounded ones get quoted and announced too. Don't let bad ideas drive out good ones in the public mind. You owe it to your field and your fellow professionals to get your analysis out, over and over again.

• **Maximize the possibility of being quoted, and being quoted right, by summarizing in a simple sentence.** Use everyday words. If possible, use an everyday image. Some of these—"baby boom," "supermom," "the graying of America"—have entered everyday language. You know that you've hit it when you hear an indrawn breath and rapid keyboarding on the other end of the telephone line.

• **Be positive, not negative.** *Don't* tell reporters what you can't or won't tell them; that just makes them push harder. *Do* build up what you *are* going to tell them with phrases like, "What's really interesting is. . ." or "People haven't realized yet that. . . ."

• **Realize that there is a tradeoff between getting quoted at all and getting quoted accurately.** Academic demographers often complain that reporters misquote them, or take their words out of context. This is inevitable, given the qualifyers with which we tend to couch our findings. Put your main point out there loud and clear, rather than qualifying it so much that an ordinary reader or listener would get confused. Reporters tend not to hear the qualifiers anyway.

• **Give a referral if you can't manage an answer.** Sometimes you can't answer reporters' questions (or don't want to, see Rule 1). Refer reporters to an appropriate contact at a university, the Census Bureau, or a state or local public office.

What we say to dogs
Okay, Ginger! I've had it! You stay out of the garbage! Understand, Ginger? Stay out of the garbage, or else!
What they hear
blah blah GINGER blah blah blah blah blah blah GINGER blah blah blah blah blah...

© Gary Larson

• **Realize that, sometimes, they just won't want to hear it.** There may be times when your sober judgements on a population trend simply do not fit into a reporter's preconceived story idea. Firmly provide a more balanced view. However, if you don't see your name when the story comes out, don't fret. It may be for the best.

—Martha Farnsworth Riche
Director of Policy Studies at PRB

Homeless Count Hits Street

The Census Bureau's highly controversial, media-intensive count of the homeless was recently released and, as expected, was instantly pronounced as too low. Rep. Tom Sawyer (D-Ohio) called for a congressional hearing, warning of the danger of "the use of [homeless] census counts for program purposes."

The S-Night operation counted 178,828 persons in shelters and 49,793 "visible in street locations." These figures were considerably lower than a 1989 estimate by the Urban Institute, which had placed the national homeless population at about 600,000 nationwide.

Criticism of the count was inevitable because the "count" was not really a count and the homeless population is very difficult to define. The Census Bureau included a strong warning label in its press release, stating that "S-Night was not intended to, and did not, produce a count of the 'homeless' population of the country." Rather, it was designed to "augment" the general census count by extending the enumeration to include some of those living in street areas.

Previous censuses had tried to count components of this group, for example, by sending enumerators to missions and all-night theaters. In the 1990 Census, the bureau worked more closely than previously with local governments to identify areas where homeless were more likely to be found.

—C.H.

DEMOGRAPHER'S PAGE

What Census Adjustment Would Mean

by Jeffrey S. Passel

The debate on adjusting the 1990 Census moved from the theoretical realm to the practical with the Census Bureau's release of preliminary undercount estimates on April 18.

The 1990 Census missed 4.3 to 6.3 million persons, representing a net undercount of 1.7 to 2.5 percent, according to the preliminary estimates from the post-enumeration survey (PES),[1] one of two separate Census Bureau research programs. The other program, demographic analysis (DA)[2] estimates a net undercount of 1.8 percent (4.7 million persons).

The undercount is higher than in 1980, according to DA, which estimated a net undercount of 3 million persons, or 1.2 percent in 1980. DA, which provides a consistent series of undercount estimates for the five censuses of 1940 through 1980, has never found such an increase in the undercount rate before.[3]

Adjusting the census would produce many changes. High-undercount groups, such as urban dwellers and minorities, would gain representatives in state legislatures. The distribution of federal and state funds would shift in the same direction. However, only two or three seats in Congress would probably shift between states. Redrawing congressional district boundaries would produce no more than marginal changes.

The decision on whether to incorporate an official adjustment for undercount into the 1990 Census will be made by Secretary of Commerce Robert Mosbacher and announced by July 15.[4] Among other criteria, the secretary must take into account whether an adjustment would produce a better count overall. Adjustment would be made for every block in the country. These blocks are the basic units for constructing legislative districts and population totals. For such small areas, however, adjustment would not correct specific census errors; rather the adjustment would be claimed to improve the block data "on average." For this and other reasons, adjusting the 1990 Census would not eliminate the controversy over the undercount. A decision against adjustment obviously would not end the controversy. Either way, the issue will probably find its ultimate resolution in court.

Undercounts: Who and Where

The preliminary PES and DA results will be revised to reflect later information and various kinds of statistical and demographic modeling, but the results released so far allow us to make some educated guesses about the effects of adjustments.

As in earlier censuses, the 1990 Census missed some groups more frequently than others, despite the Census Bureau's diligent efforts to eliminate these differences. According to the PES, the black population was undercounted by 4.4-6.2 percent, whereas the non-black population had an undercount of only 1.2-2.0 percent. The black/non-black differential in coverage from the PES is 3.2-4.1 percentage points. DA shows a larger difference of 6.1 percentage points between the black undercount rate of 7.2 percent and the non-black rate of 1.1 percent. This racial differential in coverage—which lies at the heart of the adjustment controversy—appears to have increased since 1980.[5]

The Hispanic population also had higher-than-average undercounts, ranging from 4.2 to 7.3 percent, according to the PES. The 1990 PES provides the first direct estimates of census coverage ever released in the United States for Asians and Pacific Islanders (0.9-4.4 percent) and American Indians (2.5-7.3 percent).[6]

Results of the preliminary 1990 PES document substantial geographic disparities in census coverage. The Northeast (1.1 percent) and Midwest (1.1 percent) regions have lower-than-average undercount rates, while the South (2.6 percent) and West (3.2 percent) have higher-than-average rates.[7] With the South's substantially increased undercount over 1980 levels, the 1990 Census apparently has returned to a pre-1980 geographic pattern of census coverage of regional undercounts.[8]

Census divisions with the most extreme undercounts are the South Atlantic (3.5 percent) and Pacific (3.4 percent). The Mountain division (2.6 percent) also has a higher-than-average undercount. The West South Central division (2.1 percent) is about average, while the other five divisions have lower-than-average undercounts.

Of the 50 states, only a few appear to have significantly higher-than-average undercounts, once the sampling variability is taken into account. California (2.7-4.7 percent) and New Mexico (2.6-5.1 percent) definitely fall above the range for the whole country (1.7-2.5 percent). In addition, several South Atlantic states apparently have high undercount rates: Virginia (2.3-4.7 percent), North Carolina (2.1-4.6 percent), South Carolina (2.2-4.7 percent), and Florida (2.2-5.1 percent).[9] The District of Columbia's extreme undercount rate (3.7-8.7 percent) reflects its totally urban character and will probably be similar to the rates for many other cities (not released as of this writing).

Adjustment: A Zero-Sum Game

Adjustment's effects on congressional apportionment, legislative redistricting, and fund allocation represent a zero-sum game; for every area that gains, there is a corresponding loss elsewhere. Adjustment would not create any additional seats in Congress, state legislatures, or city councils. Nor would it generate additional funds for distribution among competing states, counties, or cities. Because the size of the pie does not change, adjustment would not pro-

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duce the big winners that might be anticipated at first glance.

Congressional apportionment. Seats in the House of Representatives are apportioned among the states according to the Method of Equal Proportions (see *PT* July/August 1990). In this method, after each state receives its first seat, the remaining seats are assigned sequentially according to a set of "priority values." The priority value for the Nth seat in a state (for example, the second, fifth, or 40th seat) is the state's apportionment population multiplied by the factor:

$$1/\sqrt{N(N-1)}$$

The state with the largest priority value receives the 51st seat; the second largest, the 52nd seat; and so on until all 435 seats have been assigned. Priority value number 435 receives a seat while priority value number 436 does not.

Because all states are being adjusted, merely adding enough people to account for an average congressional district does not guarantee an additional seat. A state with a higher-than-average undercount rate moves up in the adjusted rankings; and so the state has a chance to gain representation. States with lower-than-average adjustments move down in the adjusted priority rankings.

The crucial priority values for a state are those for the last seat it received under the unadjusted apportionment and for the next seat it would receive. If these priority values are not close to the 435th seat, the state has no chance to gain or lose representation. Conversely, states close to the cut-off line can be affected by very small differences in adjustment factors. The 1990 apportionment illustrates how small the differences can be (see table). Had Washington's population been 10,200 smaller (or 0.21 percent), it would not have gotten its ninth seat; Massachusetts failed to get an 11th seat by 12,600 people (or 0.21 percent). Each of the last seven seats awarded could have been lost by 0.6 percent of a state's population. Priority values 436 (Massachusetts), 437 (New Jersey), and 438 (New York) each missed being above the cut-off line by less than 0.6 percent of the state's population.

Adjusting the 1990 Census affects Congressional apportionment principally for the states listed in the table. To illustrate, if the average PES values are used to adjust, three states would gain an additional seat: Georgia (12th seat), Montana (2nd seat), and California (53rd seat). The losers would be Oklahoma, Pennsylvania, and Wisconsin. However, even very small changes in the factors could affect the results. Georgia and Montana would cross the line by only 0.05 percent! Oklahoma would miss retaining a seat by the same percentage. Put another way, were Montana's adjustment 510 people smaller, it would not get a second seat.

Population Change to Lose Last Seat in Congress or to Gain an Additional Seat: 1990 Apportionment Population (Unadjusted)

Seat in House	State	Apportionment population	Population change required: Amount	Population change required: Percent
Possible losers				
428	Calif. (52)*	29,839,250	-236,002	-0.79
429	Tex. (30)	17,059,805	-104,241	-0.61
430	Miss. (5)	2,586,443	-15,648	-0.61
431	Wis. (9)	4,906,745	-29,004	-0.59
432	Fla. (23)	13,003,362	-72,490	-0.56
433	Tenn. (9)	4,896,641	-18,900	-0.39
434	Okla. (6)	3,157,604	-9,036	-0.29
435	Wash. (9)	4,887,941	-10,200	-0.21
Possible gainers				
436	Mass. (11)	6,029,051	+12,607	+0.21
437	N.J. (14)	7,748,634	+22,698	+0.29
438	N.Y. (32)	18,044,505	+98,765	+0.55
439	Ky. (7)	3,698,969	+34,258	+0.93
440	Calif. (53)	29,839,250	+401,972	+1.35
441	Mont. (2)	803,655	+11,002	+1.37
442	Ariz. (7)	3,677,985	+55,242	+1.50
443	Ga. (12)	6,508,419	+109,885	+1.69

*Total members of state's delegation to the House of Representatives.
Source. Apportionment population from the U.S. Bureau of the Census.

One cannot predict exactly how adjustment may affect congressional apportionment because the formula is so sensitive to small differences in population that may affect priority values around seat number 435. Also, the precision of the PES estimates falls far short of what is needed to guarantee that an apportionment based on adjusted data is more accurate than the one based on the unadjusted counts. The states listed above as potential gainers or losers could have their congressional delegation size affected by changes in adjustment factors of 0.8 percent or less—differences that could easily occur purely as a result of sampling variability because one standard deviation for the adjustment factors usually is in the range of 0.5-0.9 percent.

Legislative redistricting. The drawing of legislative district boundaries is inherently a political enterprise. A myriad of factors can affect the outcome, including the geographic distribution of the population, the size and distribution of minority populations, the location of jurisdictional boundaries, residential locations of incumbents, and the party affiliations and relative political power of different groups.

The potential for gaining an additional representative is a function of the size of the area, its relative undercount, and, most important of all, the average size of the legislative district. As a rule, the larger the average district size, the less likely census adjustment is to create an additional legislative district within a fixed geographic area. Because congressional districts are so large (averaging over 550,000), adjustment has only a marginal impact. However, adjustment could significantly affect the political process where districts are

Continued on next page

Germany's Demographic Future

With 79.5 million people, the unified Germany is now the largest country in Europe, but it faces possible population decline in the future. Currently, Germany's fertility is far below replacement level at 1.5 lifetime births per woman; immigration is controversial. PRB's new *Bulletin*, "Germany's Population: Turbulent Past, Uncertain Future," offers three possible scenarios of Germany's demographic future:

- **Continuation of current trends.** This "no change" hypothesis assumes that current low fertility and mortality rates in West Germany will apply to the unified Germany until 2050, with a constant net in-migration of 80,000 persons a year.
- **Extreme graying.** This scenario envisions Germany's fertility dropping even further below replacement level, while the country, moved by growing hostility toward foreigners, completely closes off immigration. In this society of extreme individualism, families with children would be rare.
- **Demographic revival.** Suppose young Germans rediscover the value of children and Germans adapt to large influxes of immigrants (300,000 a year), so that fertility rises to replacement level. This society not only would be more open, but would also radiate confidence about its future.

The "extreme graying" scenario would give Germany a mere 52 million persons by 2040, less than the present populations of France, Italy, or the United Kingdom. Under current trends, population falls below 60 million by 2040. The "demographic revival" scenario projects a population size of 95 million in 2050. Even so, after 2030, growth depends upon immigration, not natural increase.

—*S.K.*

From "Germany's Population: Turbulent Past, Uncertain Future," by Gerhard Heilig, Thomas Büttner, and Wolfgang Lutz, *Population Bulletin*, Vol. 45, No. 4. Available from the Population Reference Bureau, 1875 Connecticut Avenue, N.W., Suite 520, Washington, D.C. 20009-5728 (1-800-817-9881). Price: $8 per single copy, discounts for multiple orders.

Demographer's Page

Continued from previous page

small and concentrations of high-undercount populations are large. Inner-city areas could gain several seats in many state legislatures, and minority population concentrations could gain representatives on city and county councils.

Take a hypothetical "average" state with a counted population of 5 million, of which 25 percent is a minority population (or a central city) with a 7 percent undercount. The remaining 75 percent of the state's population is undercounted at 1 percent, and the state's overall undercount is 2.6 percent. Adjustment increases the total population count to 5,132,000. Of these, 1,344,000 people (26.2 percent) are in the high-undercount group and 3,788,000 (73.8 percent) in the low-undercount group.

The adjustment has no effect on congressional redistricting. Either way, the state has nine seats in the House, while the gain of the high-undercount group represents only about one-tenth of a seat. If the state legislature has 100 seats, the high-undercount population gains slightly more than a full seat, however, going from 25 to 26.2 seats. Gains could be even greater with a larger number of districts.

Fund distribution. A similar zero-sum process moderates the impact of census adjustment on federal fund distribution.[10] Assuming $1 billion is to be distributed among all the states, adjustment increases the allotment of our average state from $20.1 million to $20.2 million: only a 0.5 percent difference. The additional people net the state only $0.77 per person, in contrast to the initial allocation of $4.02 per person. Both the total gain and per capita gain are lower than expected because the entire U.S. population is being adjusted upward 2.1 percent. If the state's undercount had been less than 2.1 percent, adjustment would have cost it funding.

Adjustment produces winners and losers within the state as well. The allocation for the high-undercount area would increase by 5.3 percent or $266,000 (from $5,026,000 to $5,292,000), bringing an additional $2.83 (not $4.02) for each of the 94,000 people added by the adjustment. For the low-undercount area of the state, the fund allocation decreases by 1.1 percent or $164,000 (from $15,078,000 to $14,914,000). This loss occurs despite the upward adjustment of the population of the low-undercount area by 1 percent.

Adjustment and the future. Ultimately, implementation of an adjustment would change the way we view census data and probably lead to a far different mode of census-taking, one which would accommodate adjustment into the normal census operations and processing schedules. In any case, the 2000 Census promises to be very different from previous censuses. This difference will be a legacy of the adjustment controversy surrounding the 1990 Census.

Notes

1. The PES is a survey of about 165,000 housing units that is matched against census records to determine if household members were counted in the census. The ranges represent +/-2 standard deviations around the point estimate.
2. Demographic analysis is an estimate of the national population by age, sex, and race constructed with historical and administrative data (from non-census sources) on births, deaths, immigration, and emigration.
3. Robert E. Fay, Jeffrey S. Passel, and J. Gregory Robinson, *The Coverage of Population in the 1980 Census*, U.S. Bureau of the Census Evaluation and Research Report PHC80-E4, February 1988.
4. A set of guidelines published in March 1990 provides the framework for the secretary's decision, which involves not only judging the quality of the census, but also the quality of the adjustment factors. (See *PT*, April 1991.)
5. Modifications for inconsistencies in race definitions between the census and DA will probably reduce the estimated black undercount by about one percentage point (to roughly 6 percent) and reduce the differential to less than five percentage points. Nevertheless, the differential has increased by about 1.5 percentage points over the 1980 levels (see Jeffrey S. Passel, testimony to the Subcommittee on Census and Population, U.S. House of Representatives, March 19, 1991).
6. The PES is the only source of undercount measures for these racial and ethnic groups. DA provides information for the black and non-black population.
7. Region and division totals reported here are the sum of mid-point estimates for states.
8. See Fay, *et al.*, *op. cit.*, and J.S. Siegal, Jeffrey S. Passel, N.W. Rives, Jr. and J.G.Robinson, "Developmental Estimates of the Coverage of the Population of States in the 1970 Census: Demographic Analysis," *Current Population Reports*, Series P-23, No. 65, December 1977.
9. These ranges may not differ significantly from U.S. averages at a 95-percent confidence level.
10. In addition, adjustment's impact is lessened further because many programs distribute funds on the basis of factors other than population, or use population figures from postcensal estimates rather than the decennial census.

Upcoming Conferences

• **Creating the 21st Century: Individual Responsibility,** July 25-26, 1991, Minneapolis, Minn., and **Business & the Future: Planning to Survive and Progress through the '90s and into the 21st Century,** September 11-13, 1991, New York, N.Y. Contact: World Future Society, 4916 St. Elmo Ave., Bethesda, MD (phone: 301-656-8274; fax: 301-951-0394).

• **Demographic and Health Surveys World Conference,** August 5-7, 1991, Washington, D.C. This nine-year project, funded by the U.S. Agency for International Development, assists government and private agencies in developing countries to conduct national sample surveys on population and health. Contact: DHS, IRD/Macro Systems, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045 (phone: 301-290-2800; fax: 301-290-2999; telex: 87775).

• **American Sociological Association** annual meeting, August 23-27, 1991, Cincinatti, Ohio. Contact: ASA, 1722 N Street, N.W., Washington, D.C. 20036 (202-833-3410).

• **Globescope Americas: Charting A Sustainable Future**, October 29-November 2, 1991, Miami, Fla. Contact: John McKain, Global Tomorrow Coalition, 1325 G Street, N.W., Suite 915, Washington, D.C. 20005-3104 (phone: 202-628-4016; fax: 202-628-4018).

• **Getting to Know You: Building Partnerships among the Disciplines and Professions,** Association for Gerontology in Higher Education 18th annual meeting, February 27-March 1, 1992, Baltimore, Md. *Deadline for papers and presentations: July 8, 1991.* Contact, AGHE, Scripps Gerontology Center, Miami University, Oxford, OH 45056.

• **Generations at Risk: We Walk on Common Ground**, March 14-17, 1992, San Diego, Calif., American Society on Aging, 38th annual meeting. *Deadline for papers and presentations: July 8, 1991.* Contact: ASA, 833 Market Street, Suite 512, San Francisco, CA 94103-1824 (415-882-2910).

SOFTWARE

Teen Scenes, Teen Times, and **Ask Dr. Know** are computer games that teach teens basic facts about contraception and show them statistics on contraceptive use, pregnancy, low birth weight babies, and other issues related to teen sexuality. Three accompanying illustrated booklets cover the same ground.

The three games deal with the same issues, but present them in different ways. The first is similar to an adventure game, where each decision on sexuality leads to a different set of circumstances. The second is a Q&A game based on U.S. statistics on teen sexuality and pregnancy. The third lets players read letters from teens to an advice columnist (Dr. Know).

The games explore contraceptive use and the choice whether or not to have sex. They present a lot of information with a light touch. There are shortcomings, however. The games present only one type of negative outcome from teen sexuality—pregnancy—an outcome that boys may find difficulty identifying with. There is no information on sexually transmitted diseases or AIDS. Relatively simple productions, these games may have an uphill climb competing with the fast-paced, colorful video and computer games to which today's teens are accustomed.

The games require an Apple Macintosh and Hypercard. Games and books are $14 each from Sociometrics Corporation, 170 State Street, Suite 260, Los Altos, CA 94022.

—E.H.

POPULATION UPDATE

Estimated United States Population:

As of March 1, 1991	251,782,000
As of March 1, 1990	249,034,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports,* Series P-25, No. 1073.

Estimated World Population:

As of June 1991	5,377,000,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: December 1990

	12 months ending with December					
	Number		Rate			
Item	1990	1989	1990	1989	1988	1987
Live births	4,179,000	4,021,000	16.7	16.2	15.9	15.7
Deaths	2,162,000	2,155,000	8.6	8.7	8.8	8.7
Natural increase	2,017,000	1,866,000	8.1	7.5	7.1	7.0
Marriages	2,448,000	2,404,000	9.8	9.7	9.7	9.9
Divorces	1,175,000	1,163,000	4.7	4.7	4.8	4.8
Infant deaths	38,100	38,900	9.1	9.7	9.9	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. Monthly Vital Statistics Report (Vol. 39, No. 12) from the National Center for Health Statistics.

TAKE A NUMBER

The Absolute Numbers behind the 1991 World Population Data Sheet

Country or region (Country's world population rank in parentheses)	Population mid-1991	Projected population change 1991-2010	Annual births	Annual deaths	Natural increase	Annual infant deaths
World	5,383,886,000	1,805,324,000	142,960,000	50,418,000	92,543,000	9,658,000
More developed	1,218,774,000	126,410,000	17,603,000	11,430,000	6,173,000	239,000
Less developed	4,165,112,000	1,678,914,000	125,357,000	38,989,000	86,370,000	9,420,000
Less developed (excl. China)	3,013,812,000	1,409,914,000	101,111,000	31,309,000	69,803,000	8,620,000
Africa	676,579,000	478,655,000	29,566,000	9,507,000	20,059,000	3,011,000
Northern Africa	145,509,000	75,548,000	5,387,000	1,394,000	3,992,000	423,000
Western Africa	211,047,000	160,420,000	9,649,000	3,532,000	6,116,000	1,114,000
Nigeria (8)	122,471,000	90,571,000	5,389,000	2,021,000	3,368,000	643,000
Eastern Africa	204,143,000	162,904,000	9,781,000	3,103,000	6,679,000	1,061,000
Middle Africa	69,857,000	50,345,000	3,126,000	1,089,000	2,037,000	320,000
Southern Africa	46,023,000	29,438,000	1,624,000	389,000	1,235,000	93,000
Asia	3,154,735,000	1,042,364,000	84,242,000	27,006,000	57,236,000	5,751,000
Asia (excl. China)	2,003,435,000	773,364,000	59,995,000	19,327,000	40,669,000	4,951,000
Western Asia	134,443,000	88,116,000	4,825,000	1,156,000	3,670,000	306,000
Southern Asia	1,206,445,000	509,883,000	40,054,000	13,088,000	26,966,000	3,825,000
Bangladesh (10)	116,601,000	59,961,000	4,361,000	1,516,000	2,845,000	523,000
India (2)	859,192,000	298,590,000	26,205,000	8,764,000	17,442,000	2,385,000
Pakistan (9)	117,490,000	77,725,000	5,052,000	1,527,000	3,525,000	565,000
Southeast Asia	444,736,000	146,610,000	12,234,000	3,716,000	8,518,000	777,000
Indonesia (5)	181,366,000	56,491,000	4,534,000	1,451,000	3,083,000	331,000
East Asia	1,369,111,000	297,755,000	27,128,000	9,045,000	18,083,000	844,000
China (1)	1,151,300,000	269,000,000	24,246,000	7,679,000	16,567,000	800,000
Japan (7)	123,824,000	11,999,000	1,238,000	830,000	409,000	6,000
North America	279,739,000	50,888,000	4,588,000	2,396,000	2,192,000	41,000
United States (4)	252,783,000	46,247,000	4,196,000	2,199,000	1,997,000	38,000
Latin America	451,256,000	166,788,000	12,579,000	3,247,000	9,334,000	653,000
Central America	115,581,000	50,746,000	3,563,000	715,000	2,848,000	162,000
Caribbean	33,565,000	9,079,000	879,000	275,000	606,000	48,000
South America	302,110,000	106,963,000	8,137,000	2,257,000	5,880,000	442,000
Brazil (6)	153,322,000	54,131,000	4,186,000	1,211,000	2,974,000	264,000
Europe	502,254,000	17,929,000	6,317,000	5,128,000	1,188,000	71,000
Northern Europe	84,574,000	2,481,000	1,152,000	947,000	205,000	9,000
Western Europe	176,082,000	6,058,000	2,148,000	1,834,000	314,000	16,000
Eastern Europe	96,721,000	5,665,000	1,392,000	1,069,000	323,000	25,000
Southern Europe	144,877,000	3,725,000	1,624,000	1,278,000	346,000	21,000
USSR (3)	292,030,000	40,808,000	5,140,000	2,920,000	2,219,000	118,000
Oceania	27,293,000	7,892,000	528,000	213,000	315,000	13,000

ADDENDA

ZIPPY
"THIS YEAR'S MODEL"
BILL GRIFFITH
HI! I'M CRESILLIA!! TH' CORPORATE CLOWN!!
WOW! I FEEL A CORPORATE CHUCKLE RISING IN MY THROAT AS WE SPEAK!
MY NAME AND LOOK WERE DESIGNED BY A MAJOR IMAGE CONSULTING FIRM ON TH' WEST COAST!
YOU'RE BENDABLE! YOU'VE GOT UPSELL BUY-IN!!
I'M PERCEIVED OF BY THE 25-TO-45'S AS NOSTALGIC, FRIENDLY, FRISKY & SLIGHTLY IMPISH!
CALM DOWN, CRESILLIA. YOUR DEMOGRAPHIC BULGE IS SHOWING!
TOP O' THE PM TO JOYCE ZAUNERS!

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 1875 Connecticut Ave., N.W., Suite 520, Washington, D.C. 20009-5728.

FUTURE DEMOGRAPHIC TRENDS IN EUROPE AND NORTH AMERICA: What Can We Assume Today? edited by Wolfgang Lutz. London: Academic Press, 1991. 585 pages. $50.00 hardback. ISBN 0-12-460445-5.

Europe and North America have transcended the problems of high fertility and soaring population growth that plague much of the rest of the world. As more developed countries, they instead face aging populations, influx of (sometimes) unwelcome Third World immigrants, and a constricting labor force. This volume, part of a larger series called *Studies in Population,* presents papers on these subject that in part arose from an October 1988 conference sponsored by the IIASA (International Institute for Applied Systems Analysis). The 25 papers by noted demographers examine the determinants of future growth in most of the industrialized world.

While the topics encompass the usual demographic variable—fertility, mortality, and migration—the specific issues underscore the very different demographic experiences in the industrialized and developing worlds. The seven papers disputing various estimates of human longevity, for example, could only be relevant to countries that have long since eradicated the major infectious diseases.

Lincoln Day's paper, subtitled "A dissenting view," suggests that all the hairsplitting about the maximum lifespan may be irrelevant because we are about to reap the deadly harvest of our arrogant treatment of mother earth. While he may overstate the risks, there already are reports of severe health problems from nuclear accidents and environmental degradation in the Soviet Union, one of the countries highlighted in the volume.

The future population size of more developed countries will depend most upon fertility levels. Even a large influx of immigrants could not slow the tremendous downward momentum toward population aging and eventual decline, according to these writers. Most agree that low fertility is here to stay, for a variety of social and economic reasons. Several papers explore the policy options for increasing fertility, which Charlotte Hohn describes as a near "hopeless battle against political and social forces. . . ."

Editor Wolfgang Lutz begins his introduction with the comment: "Projection is a difficult thing, particularly concerning the future." Perhaps readers should keep this tongue-in-cheek warning in mind when pondering the demographic future discussed in these papers.

—Mary Kent

DIVIDED FAMILIES: What Happens To Children When Parents Part, by Frank F. Furstenberg, Jr. and Andrew J. Cherlin. Cambridge, Mass.: Harvard University Press, 1991. 142 pp. $18.95 hard back. ISBN 0-674-655761.

Divided Families launches a new Harvard University Press series on the *Family and Public Policy*—"short volumes by scholars who seek the opportunity to step back from their research and communicate important conclusions to policymakers, practitioners, and the public at large."

It is indeed an excellent beginning, in which two seasoned family scholars examine the effect on children and family of the "new marriage system, in which parents get to choose new partners" through divorce and remarriage. Collaboration of authors and editors has achieved the readability that policymakers need through a nontechnical vocabulary, lively prose style, anecdotes drawn from case histories, and a strong sense of a story unfolding.

The authors discuss society's acceptance of divorce in recent decades, the emotional as well as the legal aspects of unraveling of marriage, children's emotional adjustment to divorce, the sharp loss of income that most divorcing mothers experience, custody, and child support issues.

Remarriage, which often binds up the financial wound inflicted by divorce, sets children into a new type of extended family—"thin kin." Contact with biological fathers declines rapidly, which also jeopardizes ties to paternal grandparents and other paternal relations.

Meanwhile the numbers of potential quasi-kin expand through their mother's remarriage(s). The extent to which these divorced parents and quasi-kin function as real "family" for children depends on active choice on both sides, vulnerable to the erosion of time.

The authors seem to doubt if absent fathers can be helped to play a larger role in their children's lives. For most fathers, whether absent or present "marriage and parenthood are a package deal. Their ties to their children and their feelings of responsibility for their children, depend on their ties to their [current] wives. . . .If the marriage breaks up, the indirect ties between fathers and children are also broken."

Policy prescriptions include helping the custodial parent to function after the breakup through more aggressive child support enforcement, welfare reforms, and mental health intervention. To shield children from conflicts between divorced parents, they recommend shared legal custody, but physical custody with the primary caretaker, and mediation of property disputes.

—Susan Kalish

SPOTLIGHT

TANZANIA

Population (mid-1991 est.): 26.9 million
Total area: 364,000 sq. mi.
Population density: 74 per sq. mi.
Births per 1,000 pop.: 50
Deaths per 1,000 pop.: 13
Rate of natural increase: 3.7 percent
Total fertility rate: 7.1 children per woman
Infant mortality rate: 102 infant deaths per 1,000 live births
Life expectancy at birth: 54 years
Capital: Dar-es-Salaam

by Gwenda Brophy

This vast territory, formerly the British East African colony of Tanganyika, obtained independence in 1961 and merged with the small islands of Zanzibar in 1964 to become the United Republic of Tanzania. Tanzania borders eight countries: Kenya, Uganda, Rwanda, Burundi, Zaire, Zambia, Malawi, and Mozambique. Massive Lake Victoria indents its northern border, while Lake Tanganika winds along its western edge, and Lake Malawi touches the south. The country's eastern edge is a 885-mile coastline washed by the Indian Ocean.

Julius Nyerere "The Teacher" ruled the one-party state for a quarter-century until 1985, when he stepped down and Ali Hassan Mwinyi became president in an uncontested election. After the 1967 Arusha Declaration championing "socialism and self-reliance," the banks, commerce, and industry were nationalized; state-owned marketing boards were created; and a policy of *ujamaa* or "villagization" was pursued. The policy apparently proved most successful in activities such as community pooling of resources to build schools and clinics. The government, however, could not always cope with the resulting demand for teachers, nurses, and drugs.

Tanzania grew poorer over the last 20 years despite $10 billion worth of foreign aid. It is currently one of the poorest countries in the world, with an estimated gross national product of $220 per capita. The vast majority of its workforce is in agriculture, fishing, and forestry, which accounted for 83 percent of the economically active population and 38 percent of the gross domestic product in 1985. The mainland is about equally divided among Christian, Moslem, and traditional African beliefs, with Zanzibar largely Moslem.

The country's 26 million population is one of the fastest growing in sub-Saharan Africa. At current rates of natural increase, the population doubling time is just 19 years. The government views population growth as too high, but has not drawn up a comprehensive policy. Tanzania has a young population (almost half is under 15 years of age) and a high infant mortality rate (102 infant deaths per 1,000 births). Average lifetime fertility is over seven children per woman.

The Ministry of Health Services makes contraceptive services available, but contraceptive use remains low nationally. The International Planned Parenthood Federation has established integrated projects that incorporate family planning, nutrition, and parasite control. In 1988, a community-based distribution project was initiated to expand services in the capital.

One-fifth of the population lives in urban areas, with about one-quarter of these in the capital, which grew from 150,000 people at independence to over 1.3 million today. During the 1980s, urban population growth averaged 11 percent a year, greatly straining the urban infrastructure. A lack of investment in infrastructure and ever-mounting population pressure in Dar-es-Salaam have contributed to a dilapidated state of buildings and roads, a near-collapse of public transportation, and strain on electrical, water, and sanitation services.

Rural areas also face infrastructure problems. Two-thirds of Tanzania's roads are impassable, making it difficult to market tea, coffee, and maize and adversely affecting domestic and export business.

The 1986 Economic Recovery Program is under way, and the private sector is responding hesitantly. A massive new World Bank project aims to rehabilitate the education system.

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